

**Amendments to the Specification**

Please replace the title as follows:

~~METHOD FOR CONTROLLED FREE RADICAL POLYMERIZATION~~

METHOD FOR CONTROLLED RADICAL POLYMERIZATION

Please replace the paragraph beginning on page 8, through page 9, line 14 through line 23, with the following rewritten paragraph:

The specific monomers and comonomers which can be used in the invention include methyl methacrylate, ethyl methacrylate, propyl methacrylate (all the isomers), butyl methacrylate (all the isomers), 2-ethylhexyl methacrylate, isobornyl methacrylate, methacrylic acid, benzyl methacrylate, phenyl methacrylate, methacrylonitrile,  $\alpha$ -methylstyrene, methyl acrylate, ethyl acrylate, propyl acrylate (all the isomers), butyl acrylate (all the isomers), 2-ethylhexyl acrylate, isobornyl acrylate, acrylic acid, benzyl acrylate, phenyl acrylate, acrylonitrile, styrene, glycidyl methacrylate, 2-hydroxyethyl methacrylate, hydroxypropyl methacrylate (all the isomers), hydroxybutyl methacrylate (all the ~~monomers~~ isomers), N,N-dimethylaminoethyl methacrylate, N,N-diethylaminoethyl methacrylate, triethylene glycol methacrylate, N-methacryloyloxysuccinimide, itaconic anhydride, itaconic acid, glycidyl acrylate, 2-hydroxyethyl acrylate, hydroxypropyl acrylate (all the isomers), hydroxybutyl acrylate (all the isomers), N,N-dimethylaminoethyl acrylate, N,N-diethylaminoethyl acrylate, triethylene glycol acrylate, N-acryloyloxysuccinimide, methacrylamide, N-methylacrylamide, N,N-dimethylacrylamide, N-(tert-butyl)methacrylamide, N-(n-butyl)methacrylamide, N-methylolmethacrylamide, N-ethylolmethacrylamide, N-(tert-butyl)acrylamide, N-octadecylacrylamide, N-methylolacrylamide, N-ethylolacrylamide, N-acryloylmorpholine, vinylbenzoic acid (all the isomers), diethylaminostyrene (all the isomers),  $\alpha$ -methylvinyl-

benzoic acid (all the isomers), diethylamino- $\alpha$ -methylstyrene (all the isomers), the acid or the sodium salt of p-vinylbenzenesulfonic acid, trimethoxysilylpropyl methacrylate, tributoxysilylpropyl methacrylate, the dimethoxymethylsilylpropyl methacrylate, diethoxymethylsilylpropyl methacrylate, dibutoxymethylsilylpropyl methacrylate, diisopropoxymethylsilylpropyl methacrylate, dimethoxysilylpropyl methacrylate, diethoxysilylpropyl methacrylate, dibutoxysilylpropyl methacrylate, diisopropoxysilylpropyl methacrylate, trimethoxysilylpropyl acrylate, tributoxysilylpropyl acrylate, dimethoxymethylsilylpropyl acrylate, diethoxymethylsilylpropyl acrylate, dibutoxymethylsilylpropyl acrylate, diisopropoxymethylsilylpropyl acrylate, dimethoxysilylpropyl acrylate, diethoxysilylpropyl acrylate, dibutoxysilylpropyl acrylate, diisopropoxysilylpropyl acrylate, maleic anhydride, N-phenylmaleimide, N-butylmaleimide, N-vinylpyrrolidone, butadiene, isoprene, chloroprene, ethylene, vinyl acetate and their combinations.

Please replace the paragraph beginning on page 14, through page 15, line 31 through line 2, with the following rewritten paragraph:

When the control of the flux of initiator radicals is achieved by the control of the decomposition of the initiating agent, this control can be implemented in two ways, namely using:

- a polymerization temperature gradient appropriately chosen as a function of the polymerization stage under consideration, or
- a uniform polymerization temperature and an initiator having a high decomposition constant at the temperature under consideration, that is to say greater than that of azobisisobutyronitrile (AIBN) at this temperature.